

Appl. No.: 10/608,279
Atty Docket: CG-851D
Inventor: Francois *et al.*

IN THE CLAIMS

1. (currently amended) A molded closure comprising:

a cylindrical side wall having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal thread being inwardly directed thereon for engaging a container neck finish; and,

said auxiliary thread being disposed at a first end of said side wall to inhibit engagement of said auxiliary thread and said container neck finish and said principal thread being disposed toward an opposed second end of said side wall;

said auxiliary thread and said primary thread extending from substantially equivalent radial locations of said cylindrical side wall;

said auxiliary thread having a first depth and said principal thread having a second depth, said second depth being at least about twice said first depth.

2. (original) The molded closure of claim 1, wherein said auxiliary thread is helical.
3. (original) The molded closure of claim 1, wherein said side wall includes at least one tier.
4. (original) The molded closure of claim 3, wherein said side wall includes a distal tier and a proximal tier, said distal tier including said first inner wall of said cylindrical wall portion and

Appl. No.: 10/608,279
Atty Docket: CG-851D
Inventor: Francois *et al.*

said proximal tier including a second inner wall, said auxiliary thread being disposed on said first inner wall and said principal thread being disposed on said second inner wall.

5. (original) The molded closure of claim 1, wherein said auxiliary thread includes a first pitch and said principal thread includes a second pitch, said first pitch being unequal to said second pitch.

6. (original) The molded closure of claim 1, wherein said auxiliary thread is incongruent with said principal thread.

7. (currently amended) A molded closure comprising:

a side wall having at least one cylindrical wall portion, said cylindrical wall portion having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed for engaging a mold core thread and enabling removal of said closure from said mold core following a short shot;

said side wall also having at least one principal thread, said principal thread being inwardly directed to engage a container neck finish;

~~said auxiliary thread being disposed toward a first end of said side wall and said principal thread being disposed toward a second end of said side wall~~ at opposite ends of said first inner surface of said side wall to inhibit said auxiliary thread from engaging said container neck ;

said auxiliary thread and said principal thread extending from equivalent radial locations of said first inner wall;

Appl. No.: 10/608,279
Atty Docket: CG-851D
Inventor: Francois *et al.*

said auxiliary thread being incongruent to said principal thread;

said auxiliary thread having a first depth and said principal thread having a second depth,
said first depth being less than about one-half said second depth.

8. (original) The molded closure of claim 7, wherein said auxiliary thread is helical.

9. (original) The molded closure of claim 7, wherein said side wall includes at least one tier.

10. (previously presented) The molded closure of claim 9, wherein said side wall includes a first tier and a second tier, said first tier including said first inner wall of said side wall portion and said second tier including a second inner wall, said auxiliary thread being disposed on said first inner wall and said principal thread being disposed on said second inner wall.

11. (original) The molded closure of claim 7, wherein said auxiliary thread includes a first pitch and said principal thread includes a second pitch, said first pitch being unequal to said second pitch.

12. (currently amended) A molded closure comprising:

a cylindrical side wall having an auxiliary inwardly directed thread disposed thereon, said auxiliary inwardly directed thread being helical to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal inwardly directed thread to engage a container neck finish; and,

Appl. No.: 10/608,279
Atty Docker: CG-851D
Inventor: Francois *et al.*

~~said auxiliary inwardly directed thread being disposed toward a first end of said side wall~~
~~and said principal inwardly directed thread being disposed toward a second end of said side wall,~~
thread spaced apart from said principal thread by a preselected distance,

said auxiliary inwardly directed thread having a first depth, said principal inwardly directed thread having a second depth, wherein said second depth is greater than said first depth by a factor of at least two to inhibit engagement of said auxiliary thread and said container and said auxiliary thread and said principal thread extending from equivalent radial locations of said cylindrical side wall.

13. (original) The molded closure of claim 12, wherein said side wall includes at least one tier.

14. (original) The molded closure of claim 13, wherein said side wall has a first tier and a second tier, said first tier including a first inner wall and said second tier including a second inner wall, said auxiliary inwardly directed thread being disposed on said first inner wall and said principal inwardly directed thread being disposed on said second inner wall.

15. (original) The molded closure of claim 14, wherein said first depth is less than one-half the length of said second depth.

16. (original) The molded closure of claim 12, wherein said auxiliary inwardly directed thread includes a first pitch and said principal inwardly directed thread includes a second pitch, said first pitch being unequal to said second pitch.

17. (currently amended) A molded closure comprising:

Appl. No.: 10/608,279
Atty Docket: CG-851D
Inventor: Francois *et al.*

a cylindrical side wall having at least one cylindrical wall portion, said cylindrical wall portion having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal thread, said principal thread being inwardly directed for engaging a container neck finish;

said auxiliary thread being disposed toward a first end of said side wall to inhibit engagement of said auxiliary thread and said container neck finish and said principal thread being disposed toward a second end of said side wall; and,

said auxiliary thread and said primary thread extending from substantially equivalent radial locations of said cylindrical side wall;

said side wall having a first diameter intersecting a portion of said auxiliary thread and said side wall having a second diameter intersecting a portion of said principal thread, said first diameter being less than said second diameter;

said auxiliary thread having a first depth being less than a second depth of said principal thread by a factor of at least one-half.

18. (original) The molded closure of claim 17, wherein said auxiliary thread is helical.

19. (original) The molded closure of claim 17, wherein said side wall includes at least one tier.

Appl. No.: 10/608,279
Atty Docket: CG-851D
Inventor: Francois *et al.*

20. (original) The molded closure of claim 19, wherein said side wall includes a first tier and a second tier, said first tier including said first inner wall of said cylindrical wall portion and said second tier including a second inner wall, said auxiliary thread being disposed on said first inner wall and said principal thread being disposed on said second inner wall.

21. (original) The molded closure of claim 17, wherein said auxiliary thread includes a first pitch and said principal thread includes a second pitch, said first pitch being unequal to said second pitch.

22. (original) A molded closure, comprising:

a primary helical thread formed on a cylindrical side wall of said molded closure;

a separate auxiliary thread formed on said cylindrical side wall of said molded closure along an upper periphery;

said primary helical thread having a first thread depth, said auxiliary thread having a second thread depth, said first thread depth being at least about double said second thread depth.

23. (currently amended) A molded closure having a primary thread and an auxiliary thread on an inner side wall, comprising:

a molded closure having an inwardly directed auxiliary helical thread to enable removal of said closure from a mold core following a short shot and an inwardly directed primary helical thread, said auxiliary helical thread formed on a peripheral end of said molded closure, said auxiliary thread having a first thread depth, said primary thread having a second thread depth, said first thread depth

Appl. No.: 10/608,279
Atty Docket: CG-851D
Inventor: Francois *et al.*

less than said second thread depth by a factor of at least one-half to inhibit engagement of said auxiliary thread and a container neck;

~~said molded closure having a first and a second tier, said auxiliary thread formed on said first tier and said primary thread formed on said second tier;~~

said auxiliary thread and said primary thread extending from substantially equivalent radial locations of a sidewall of said closure;

wherein said auxiliary thread is a congruent helical thread and said primary thread is a congruent helical thread, said auxiliary thread incongruent with said primary thread.

24. (canceled)

25. (currently amended) A molded closure which is easily removable from a mold core during manufacturing malfunctions, comprising:

a top wall;

a cylindrical side wall having an inner surface depending from said top wall;

an auxiliary thread having a first thread depth and being adjacent said top wall to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

a primary thread having a second thread depth and being disposed at an end of said side wall opposite said auxiliary thread for engaging a container neck finish;

said second thread depth being at least about twice said first thread depth to inhibit engagement of said auxiliary thread and said container neck finish;

Appl. No.: 10/608,279
Atty Docket: CG-851D
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said auxiliary thread and said primary thread extending from equivalent radial locations of said cylindrical side wall.

26. (currently amended) A molded closure which is easily removable from a mold core during manufacturing malfunctions, comprising:

a top wall;

a substantially continuous cylindrical side wall having an inner surface depending from said top wall;

an auxiliary thread having a first thread depth and being adjacent said top wall to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

a primary thread having a second thread depth and being disposed at an end of said side wall opposite said auxiliary thread for engaging a container neck finish;

said second thread depth being at least about twice said first thread depth to inhibit engagement of said auxiliary thread and said container neck finish;

said auxiliary thread and said primary thread extending from equivalent radial locations of said cylindrical side wall.